

Strategic Airlift



612-530



References



DOD 4500.9-R, DTR, Part III,
Mobility

FM 55-9, *Unit Air Movement
Planning*



AMC AIRCRAFT AIRLIFT CAPABILITIES



Definitions



Inter-theater operations (between two theaters - strategic)



Cargo only aircraft

Cargo/Refueling aircraft

■ Intra-theater operations (within a specific theater - tactical)





C-130 HERCULES PROFILE



- **First Entered Service: April 1955**
- **Over 25 variations in use**
- **C-130J Model (Newest-Pictured)
Replacing Aging E Model C-130s**



C-130 "Hercules"



- Primary Function: Tactical/ intra-theater airlift.
- Length: 97 feet, 9 inches
- Height: 38 feet, 3 inches
Wingspan: 132 feet
- Maximum Takeoff Weight: 155,000 pounds
Range: 2,356 miles with maximum payload; 5,200 miles with no cargo





C-130 "Hercules"

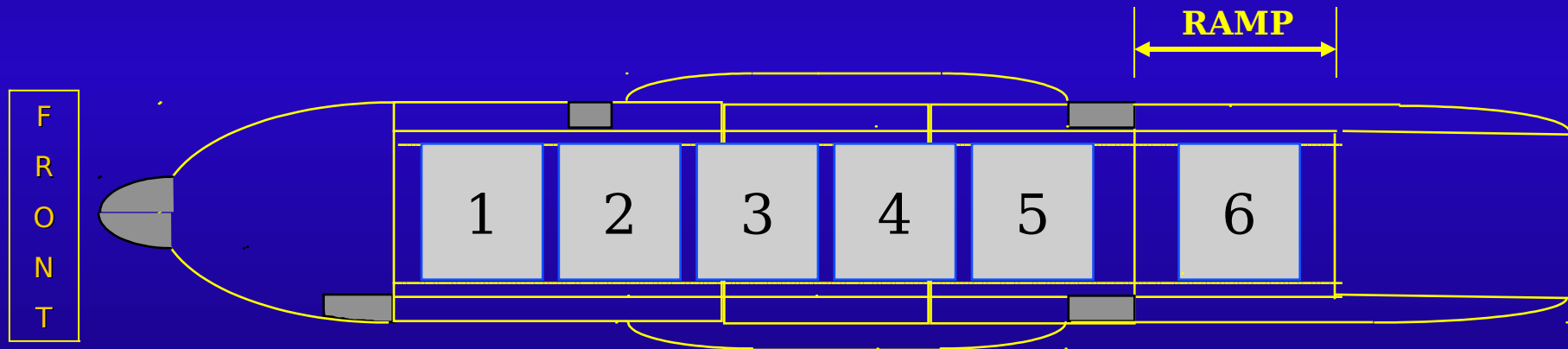
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- Cargo
Compartment:
Length, 41 feet;
Width, 108 inches;
Height, 9 feet.
- Rear ramp (one pallet position); length, 88 inches; width, 108 inches; height, 76 inches





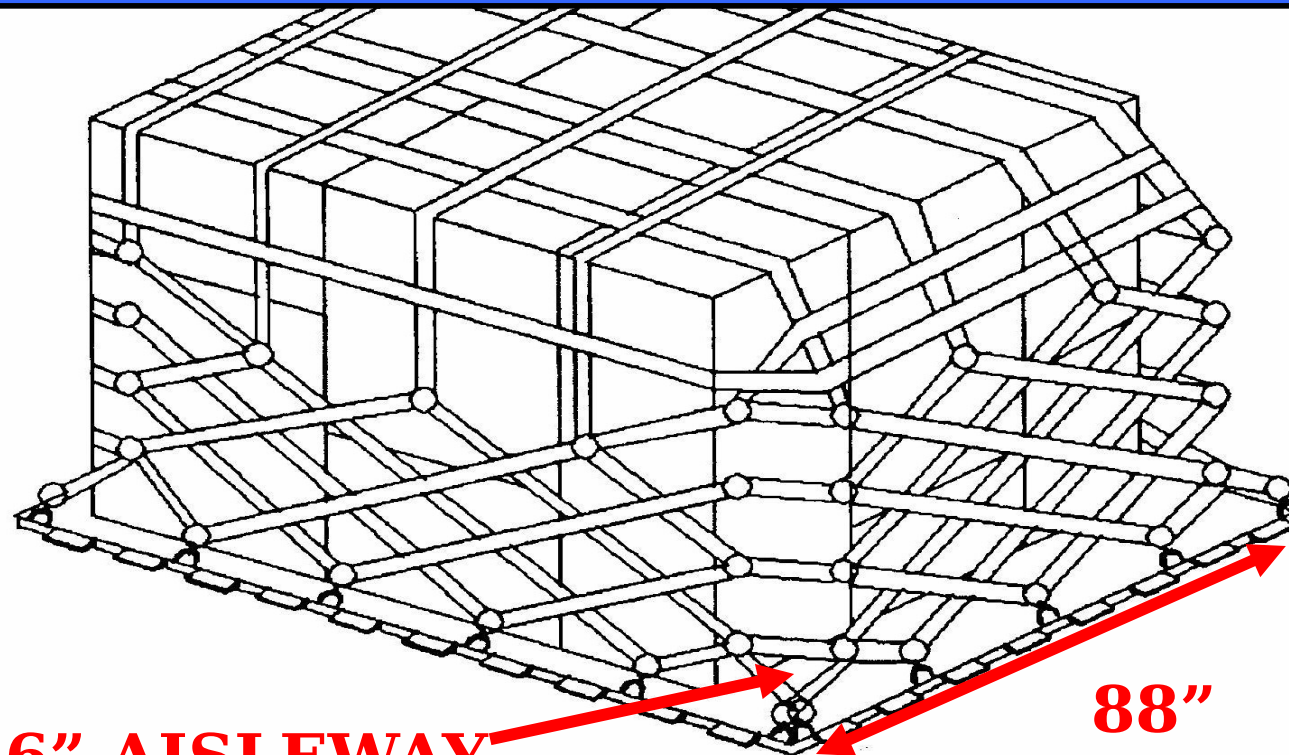
C-130 "Hercules" (Cont)



C-130 PALLET POSITIONS



C-130 "Hercules" (Cont)



6" AISLEWAY

88"

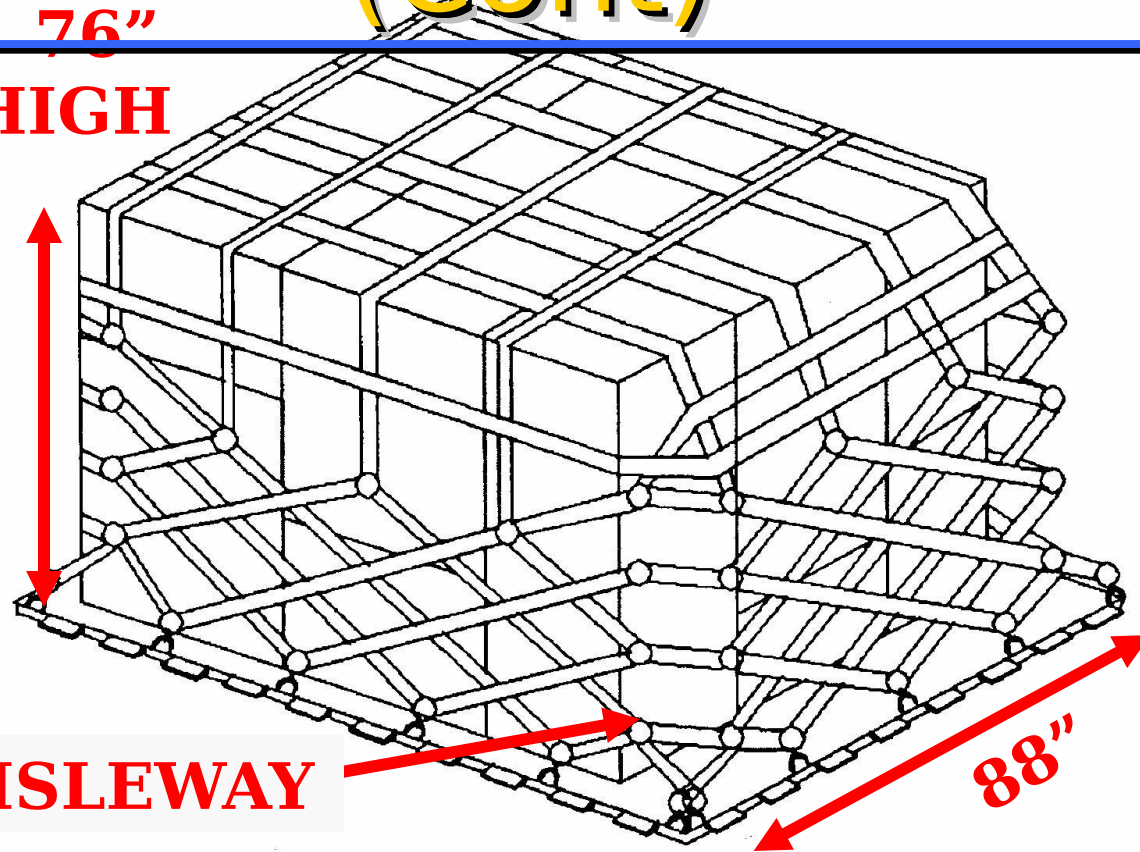
C-130 PALLET POSITIONS 3 & 4



C-130 "Hercules" (Cont)

76"
HIGH

18" AISLEWAY



C-130 RAMP PALLET POSITION
#6



C-130 "Hercules"

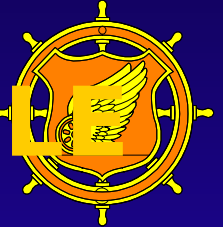
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- Crew: Five (two pilots, a navigator, flight engineer and loadmaster); transports up to 92 troops, 64 paratroops, 74 litter patients, or six standard freight pallets. Maximum cargo capacity is 45,000 pounds



C-141B STARLIFTER PROFILE



- **Workhorse of the Air Mobility Command**
- **Long Range, High Speed, Medium - Heavy Transport**
- **A Model Entered Service: May 1964**
- **B Model Entered Service: Dec 1979**
- **Replaced by C-17**



C-141B "Starlifter"



C-141B - PRIMARY MISSION IS
INTERTHEATER AIRLIFT



C-141B "Starlifter"

(Cont)

- Primary Function: Cargo and troop transport
- Wingspan: 160 feet
- Length: 168 feet, 4 inches Height: 39 feet,
- Range: Unlimited with in-flight refueling
- Maximum Takeoff Weight: 323,100 lbs





C-141B "Starlifter" (Cont)



- Load:
 - Either 200 troops,
 - 155 paratroops,
 - 103 litters and 14 seats, or
 - 68,725 lbs of cargo





C-141B "Starlifter"

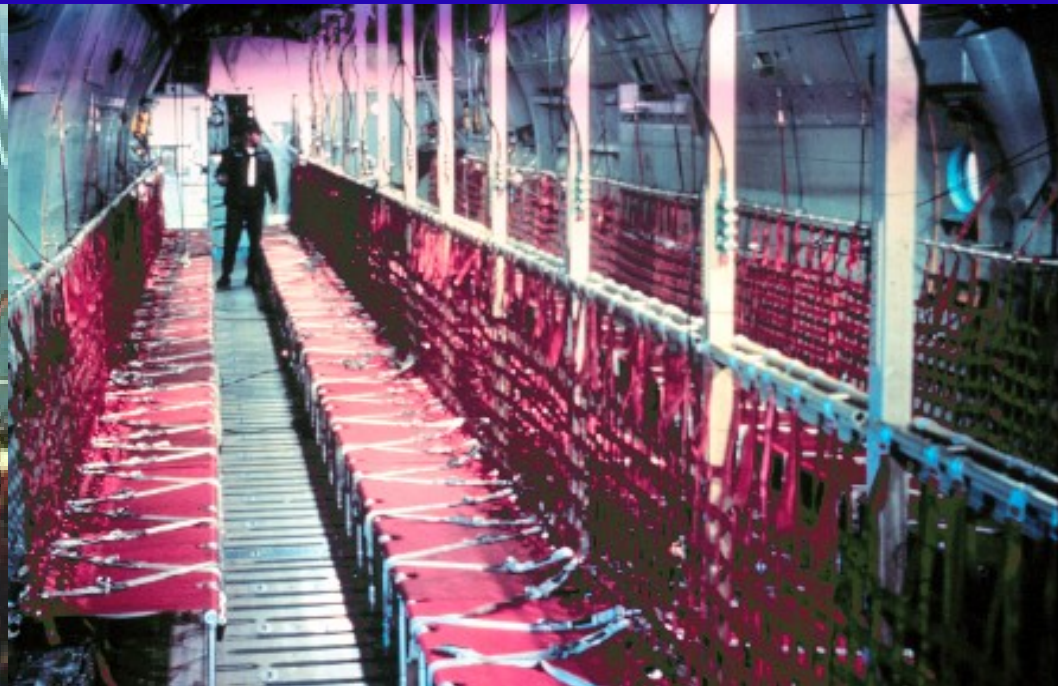
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SEATING CONFIGURATIONS

**AFT FACING SEATS & LITTERS
INSTALLED**

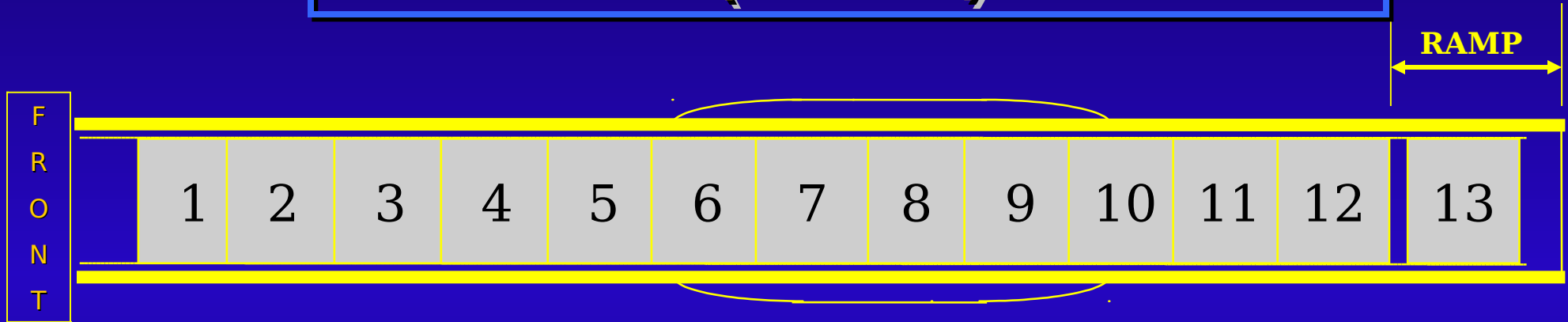


CENTERLINE & SIDEWALL SEATING





C-141B "Starlifter" (Cont)



C-141B PALLET POSITIONS

- Cargo Compartment: Height, 9 feet 1 inch; length, 93 feet 4 inches; width, 10 feet 3 inches. Cargo Door: Width, 10.25 feet; Height, 9.08 feet



C-141B "Starlifter"



- Crew of five: two pilots, two flight engineers and one loadmaster (one navigator added for airdrops). Aeromedical: two flight nurses and three medical technicians



C-17 GLOBEMASTER III PROFILE



- **Outsize Cargo Airlifter**
- **Strategic / Tactical Long Range, High Speed, Heavy Transport**
- **Replacing Aging C-141Bs**
- **Provides Direct Delivery: Cargo - Pax**
- **Entered Service: Jan 1995**
- **Programmed to receive 120 by 2005**



C-17 "Globemaster III"

- Primary Function: "III"
Cargo and troop transport
- Wingspan: 169 feet 10 inches (to winglet tips)
- Length: 174 feet
- Range: Global with in-flight refueling.
- Height: 55 feet 1 inch
- Maximum peacetime takeoff weight: 585,000 pounds





C-17 "Globemaster III" (Cont)



- Cargo Compartment:
- Length: 88 feet
- Width: 18 feet
- Height: 12 feet, 4 inches
- Cargo Load: 170,900 pounds of cargo (18 pallet positions)





C-17 “Globemaster III” (Cont)



PALLETS MUST BE ROTATED 90 DEGREES WHEN LOADING THIS CONFIGURATION

C-17 PALLET POSITIONS LOGISTICS CONFIGURATION



C-17 "Globemaster III" (Cont)



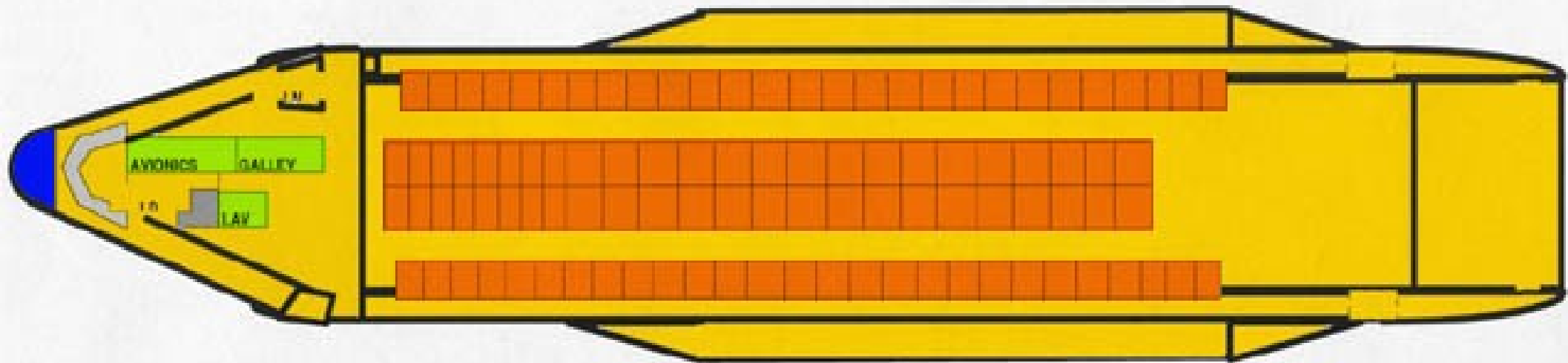
- Crew: Three (two pilots and one loadmaster)
- Load: 102 troops/paratroops; 48 litter and 54 ambulatory patients and attendants



C-17 "Globemaster III" (Cont)



TROOP SEATING DIAGRAM



TROOP CONFIGURATION

BASIC

54 INTEGRAL SIDE SEATS

48 CENTER SEATS

102 TOTAL SEATS



C-17 "Globemaster III" (Cont)



**CLOSE-UP VIEW
OF TROOP SEAT**





C-17 "Globemaster III" (Cont)



C-17 "TYPICAL LOAD"





C-5 GALAXY PROFILE



- **Outsize Cargo Airlifter**
- **Long Range, High Speed, Heavy Transport**
- **A Model Entered Service: June 1970**
- **B Model Entered Service: 1986**





C-5 "Galaxy"



- Primary function: Outsized cargo transport
- Wingspan: 222.9 feet, Length: 247.1 feet,
- Range: 4,400 miles (loaded)
- Height: 11,500 miles (unloaded)





C-5 “Galaxy” (Cont)



- Special ability to lower front or rear of aircraft for loading
- crew, pilot, two flight engineers and three



Forward kneeling



C-5 "Galaxy" (Cont)



**C-5 KNEELED - FWD & AFT RAMP
OPEN**
"DRIVE THRU CAPABILITY"





C-5 “Galaxy” (Cont)



- Cargo compartment: Height: 13.5 ft
Width: 19 ft
Length: 143 ft, 9 inches
- Maximum cargo capacity: 170,000 lbs





C-5 “Galaxy” (Cont)



C-5 Pallet Positions - 36

F R O N T	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36
	1	3	5	7	9	11	13	15	17	19	21	23	25	27	29	31	33	35

FWD RAMP

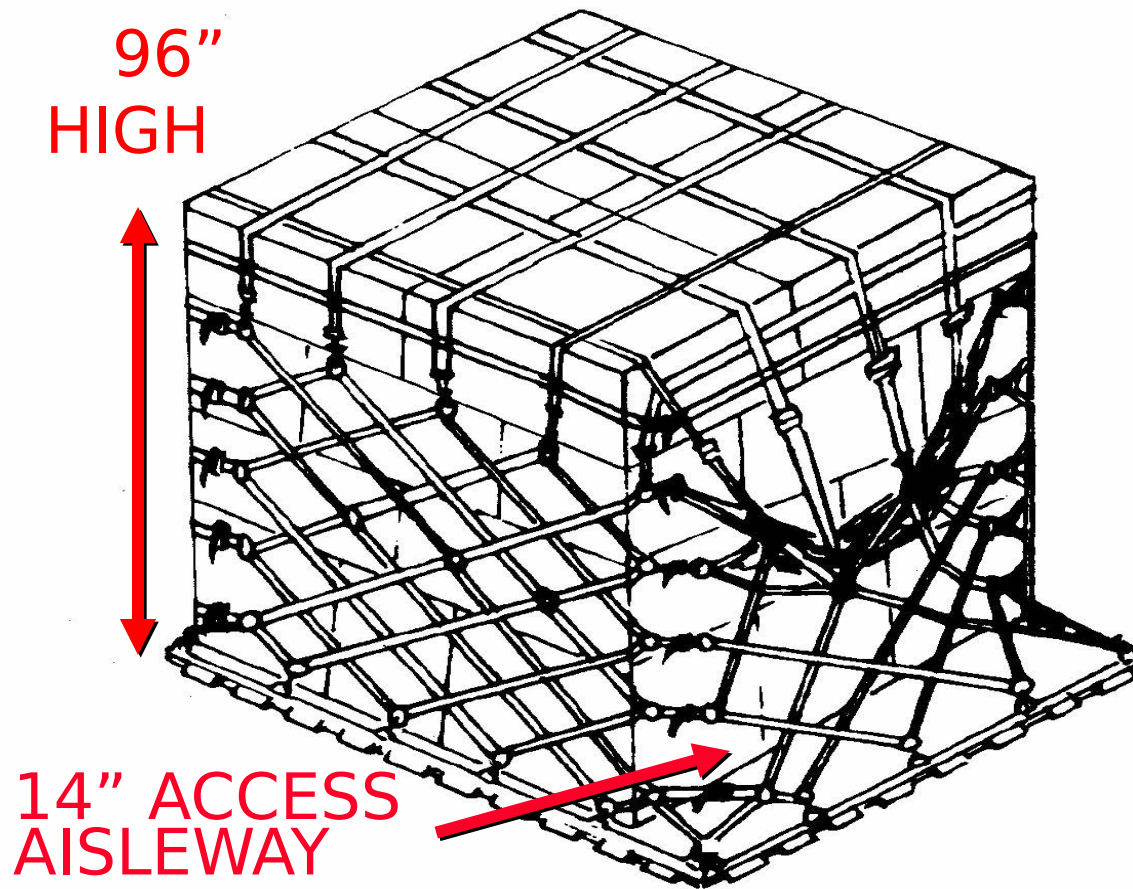
AFT RAMP

C-5 Pallet positions 1 & 2
- Fwd ramp

C-5 Pallet positions 35 &
36
- Aft ramp



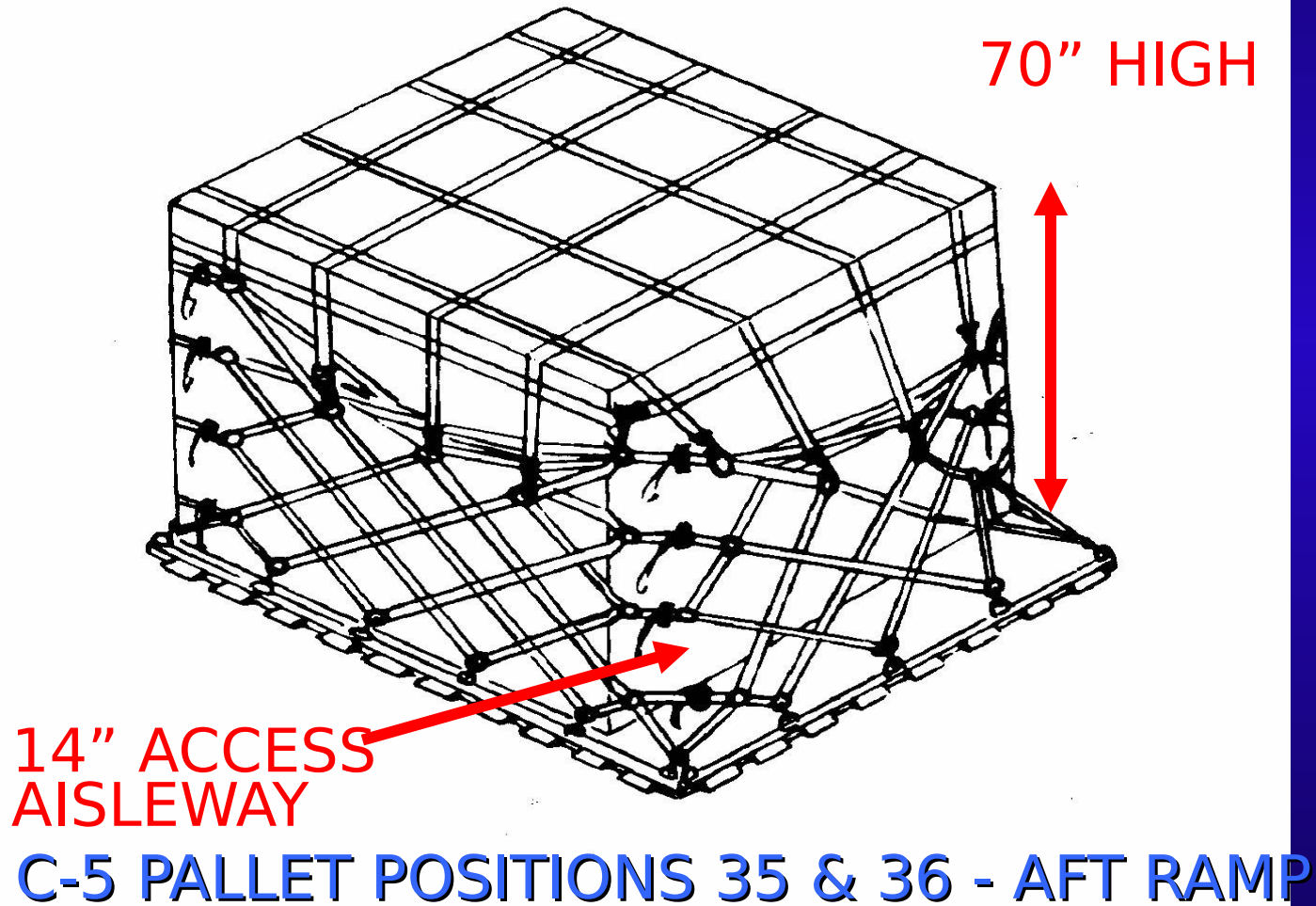
C-5 "Galaxy" (Cont)



C-5 PALLET POSITIONS 1 & 2 - FWD RAMP



C-5 "Galaxy" (Cont)





C-5 "Galaxy" (Cont)





KC-10 EXTENDER PROFILE



- **Dual Role: Cargo / Passengers - Inflight Refueling**
- **Max. Fuel Load: 356,000 Lbs. (Six fuel cells)**
- **Max. Unrefueled Range: 4,400 NM With Cargo (85 S/T)**
- **Maximum Takeoff Weight: 590,000 Lbs.**
- **Entered Service: March 1981**



KC-10A

"Extender"

- Primary Function: Aerial tanker and transport
- Length: 181 feet, 7 inches Height: 58 feet, 1 inch
- Wingspan: 165 feet, 4.5 inches
- Maximum Takeoff Weight: 590,000 pounds
- Range: 4,400 miles (3,800 nautical miles) with cargo



KC-10 INFLIGHT REFUELING MISSION





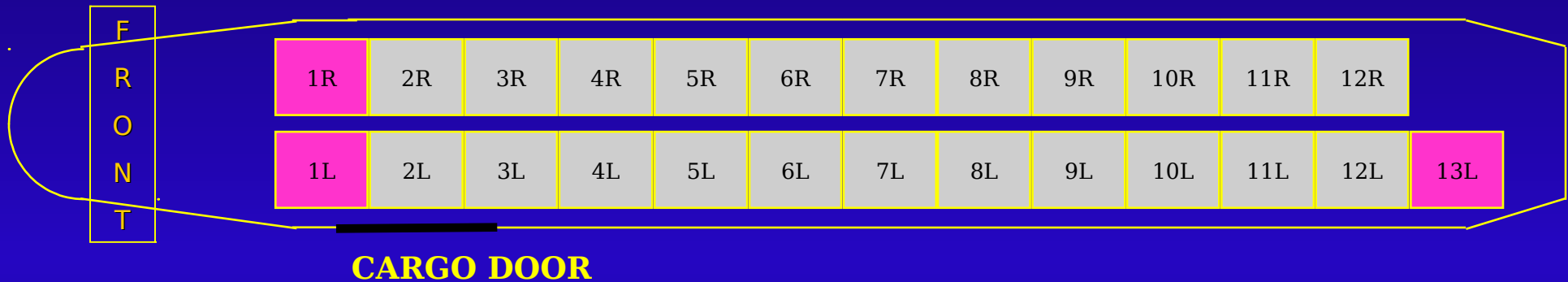
KC-10A “Extender” (Cont)

- Maximum Cargo Payload: 170,000 pounds
- Pallet Positions: 25
- Crew: Four (aircraft commander, pilot, flight engineer and boom operator)





KC-10A “Extender” (Cont) KC-10 PALLET POSITIONS



- NOTE: Positions 1L & 1R are normally not used (seats installed) Pallet position 13L is not offered for cargo
- Pallets must be rotated 90 degrees to be loaded



KC-10A "Extender" (Cont)



CARGO COMPARTMENT - AFT



Courtesy: Dan Parent

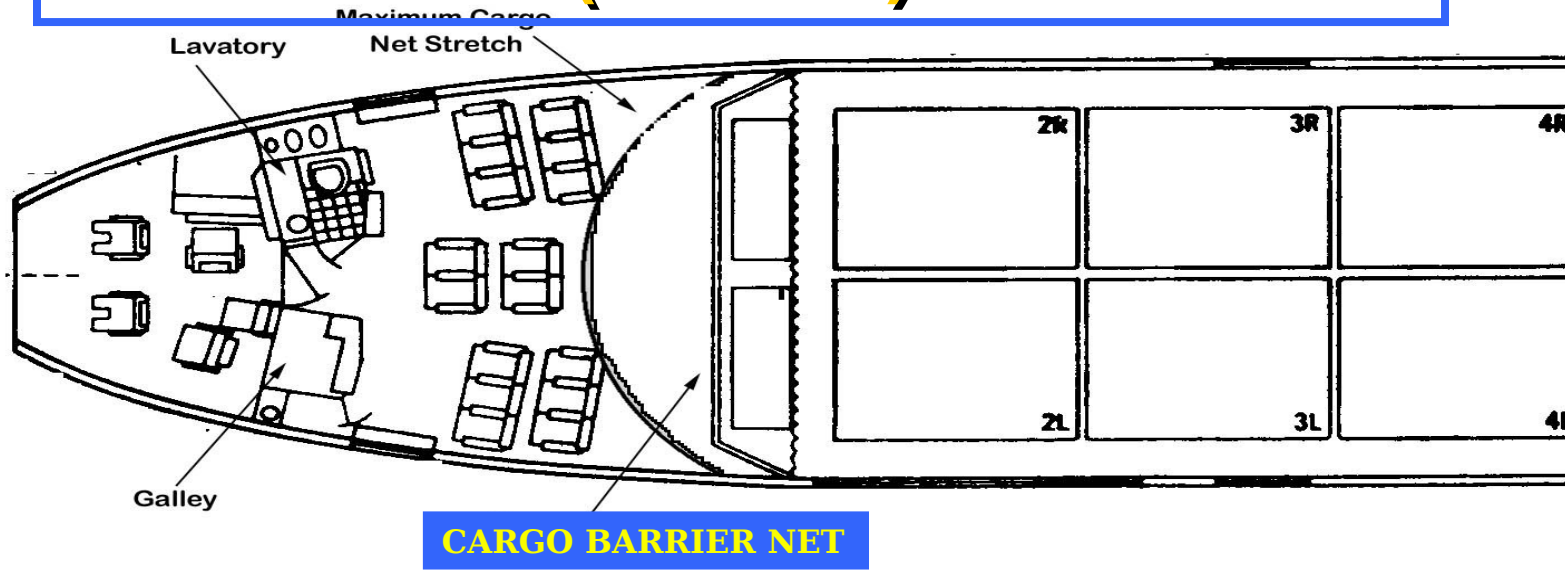
TROOP SEATS





KC-10A "Extender" (Cont)

CONFIGURATION CODE F



22 PALLET POSITIONS AVAILABLE

10 TROOP SEATS AVAILABLE

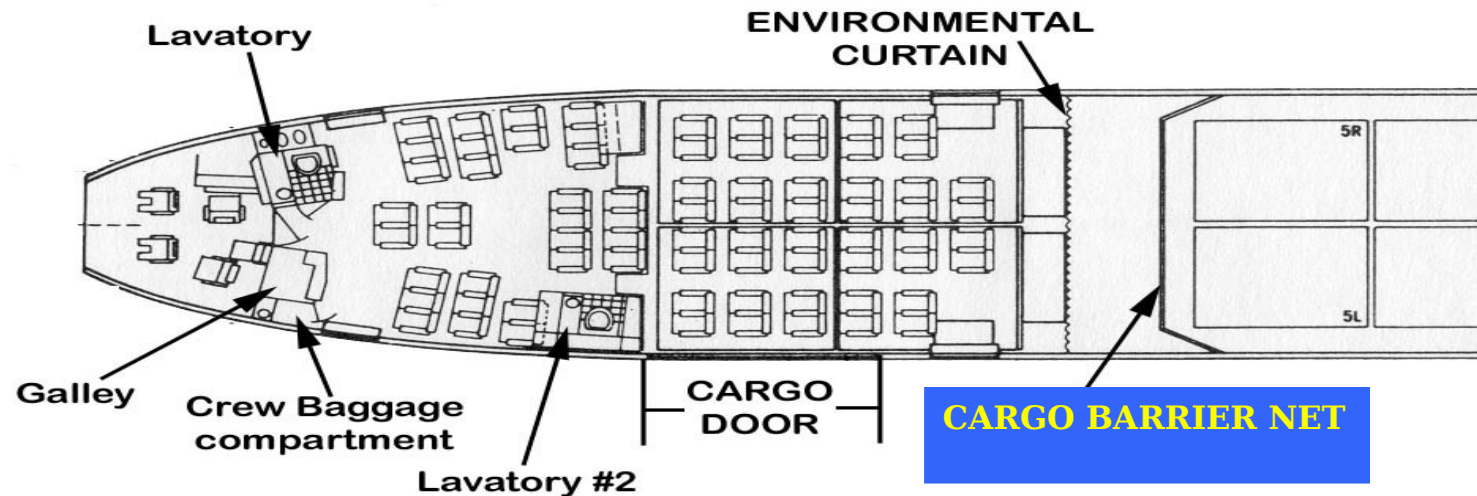
6 ADDITIONAL CREW MEMBERS

16 TOTAL SEATS



KC-10A "Extender" (Cont)

CONFIGURATION CODE D



16 PALLET POSITIONS AVAILABLE

69 TROOP SEATS AVAILABLE

6 ADDITIONAL CREW MEMBERS

75 TOTAL SEATS



KC-10A "Extender" (Cont)

KC-10 MHE MILITARY LOADER (TUNNER)





KC-10A "Extender"

KC-10 MHE (COMMERCIAL)

LOADER



Table D-3

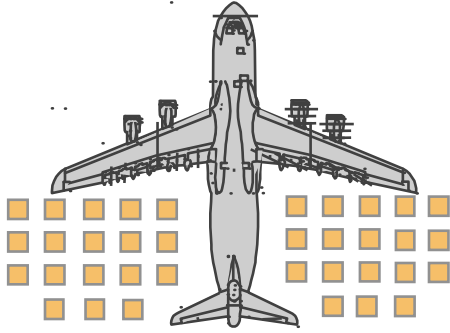
Department of Defense Airlift and Sealift Force Highlights

	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001
Intertheater Airlift (PMAI)^a							
C-5	104	104	104	104	104	104	104
C-141	199	187	163	143	136	104	88
KC-10 ^b	54	54	54	54	54	54	54
C-17	17	22	24	30	37	46	58
Intratheater Airlift (PMAI)^a							
C-130 ^c	428	432	430	425	425	425	418

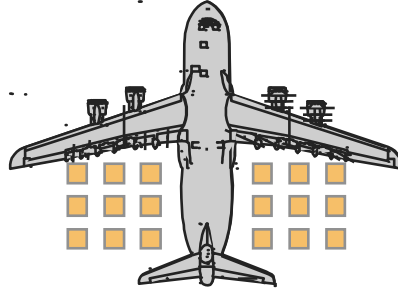
SOURCE: 2001 Annual Report to the President and Congress, Force Structure Tables

AIRCRAFT COMPARISON

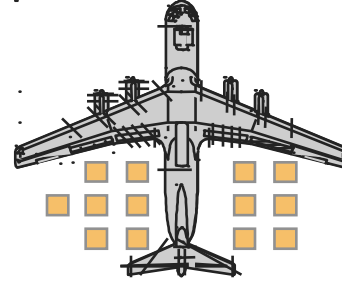
C-5



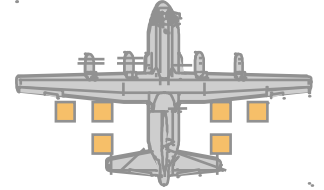
C-17



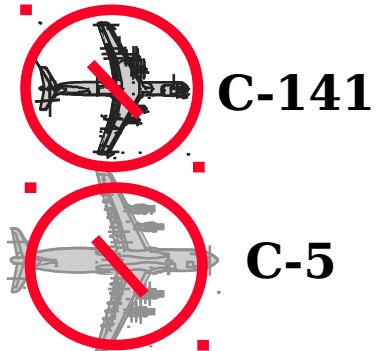
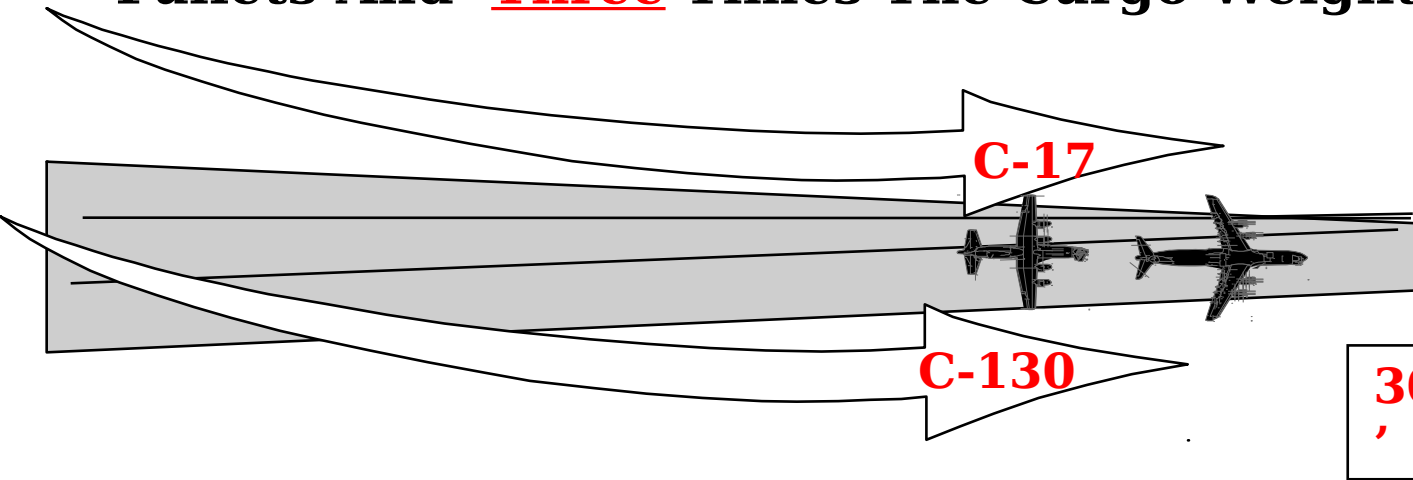
C-141



C-130



■ C-17 External Size Similar To C-141, But Carries **Five** More Pallets And **Three** Times The Cargo Weight



■ C-17 Lands At C-130 Size Airfields, But Carries **Three** Times The Number Of Pallets And **Five** Times The Cargo Weight



SMALL AUSTERE AIRFIELD ACCESS PROVIDES NEEDED FLEXIBILITY

C-17 CAPABILITY 10,000

C-141 CAPABILITY 3,500

C-5 CAPABILITY 850

FREE WORLD, EXCLUDING U.S.



Civil Reserve Air Fleet (CRAF)





CRAF (Cont)



- CRAF is a voluntary contractual program designed to augment US military airlift forces with civil air carriers to support national defense emergency airlift requirements

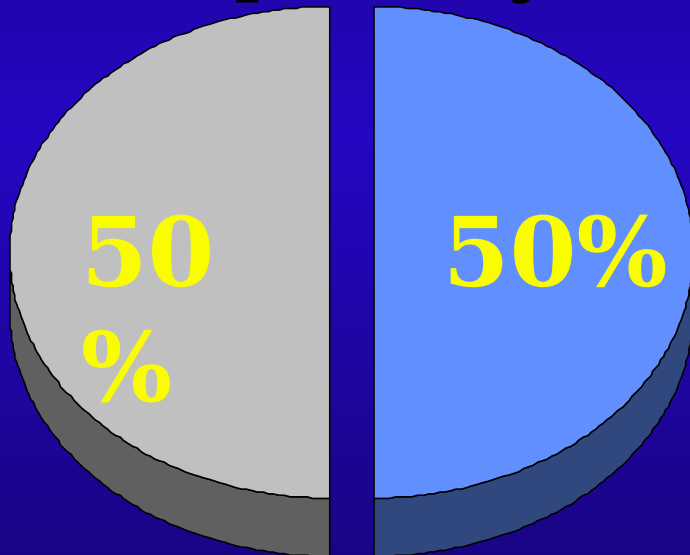




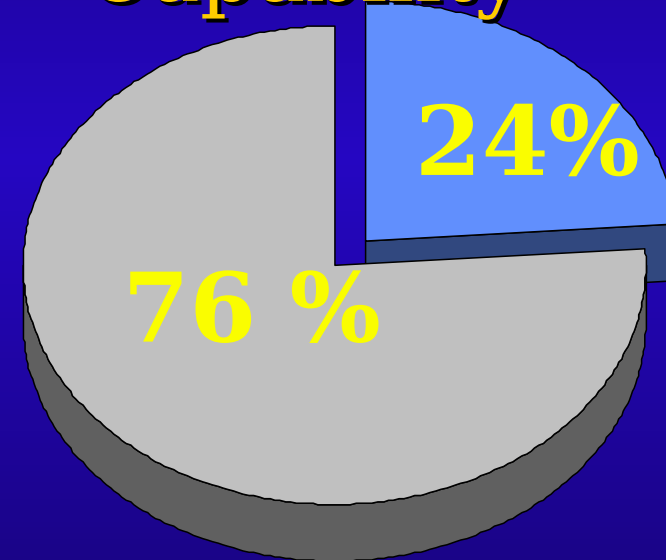
CRAF (Cont)



Strategic Capability



Cargo Lift Capability



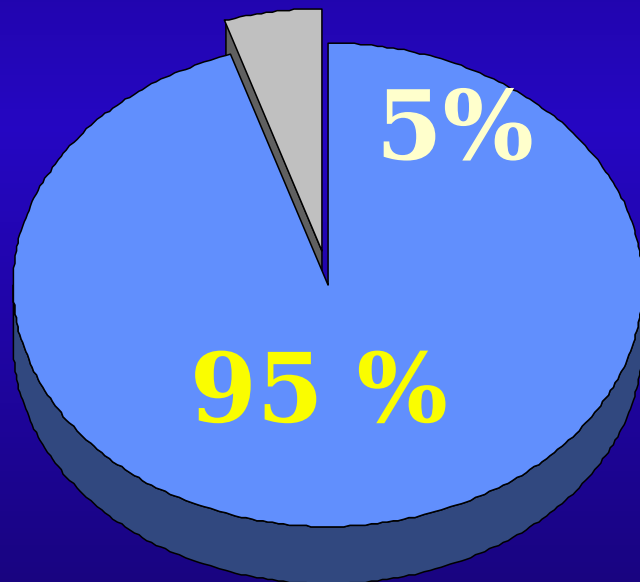
- ORGANIC AIRLIFT
- COMMERCIAL AIRLIFT



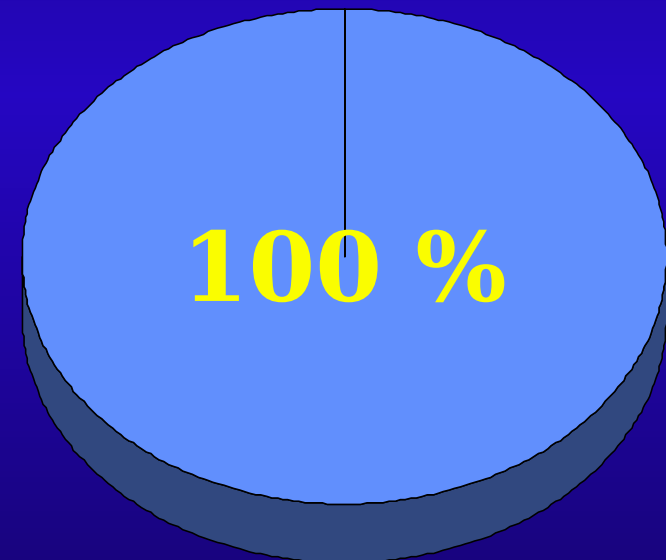
CRAF (Cont)



Passenger
Lift Capability



Aeromedical
Evac Lift
Capability



- ORGANIC AIRLIFT
- COMMERCIAL AIRLIFT



CRAF (Cont)



CRAF OPERATIONAL STAGES

- ✈ STAGE I - Committed expansion to 77 aircraft
- ✈ STAGE II - Airlift Emergency - additional 182

STAGE III - Military Emergencies up to an additional 544 aircraft available
Approximately 800+ aircraft available (1st Qtr FY 01)



CRAF (Cont)



- CRAF Operational Segments
 - International segment:
 - + Short range section
 - + Long range section
 - Aeromedical segment
 - National segment:
 - + Domestic & Alaska sections